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# Cost Management Via Product Standardization



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## AIM

In 2012, NHG GPO identified **Disposable Radiology Procedure Packs** for cost management and to drive productivity using standardized packs in the Radiology Department of Tan Tock Seng Hospital (TTSH), National University Hospital (NUH), Khoo Teck Puat Hospital (KTPH) and Alexandra Hospital (AH).

The aim was to re-engineer current work process and look at cost management in 4 aspects: (a) **cost savings**; (b) **inventory management**; (c) **packs standardization** and (d) **drive productivity** through faster procedure preparation and setup time.

As a background, there are as many as **38 consumable items** – instruments (forceps, scalpels, scissors), needles, syringes, bowls, gauzes, drapes, gowns etc used in the interventional, angiographic, drainage procedures. A majority of these items have not moved into disposables. These items will have to be sterilized by CSSD and be reused for each procedure.

## Methodology

The working group, comprises of GPO and Radiology department nurses, has identified 2 standardized Radiology packs (basic and angiographic) to be used across the Hospitals.

With Hospitals' CSSDs facing a very high workload, the focus of this project :

- 1) Move to using **100% disposables** (including the instruments) and to reduce items that require sterilization.
- 2) A **single pack** that contained all the 38 consumable items to cut down the preparation and set up time.
- 3) **Standardization** to reduce items variation.
- 4) Secure better prices through the volume aggregation.

## Operational Challenges

Inventory Management is one of the key operational challenges. Radiology department nurses have to consolidate 38 consumable items required for each procedure. This involves:

- 1) Receiving Radiology consumables from MMD
- 2) Nurses have to keep inventories for the consumables and to manage the sterilized items from CSSD.
- 3) Consolidating the sterilized re-used instruments and trays with other required items such as linen, syringes and needles etc.
- 4) After each procedure, nurses have to rinse the instruments and trays before sending down to CSSD for sterilization.
- 5) Each sterilization cycle takes 3 hours to process the instruments and trays (which include Wash, Sort, Pack, Sterilize).

## Result

The key improvements and results achieved by using **100% disposable packs** through an RFP called are as follows :

### Savings

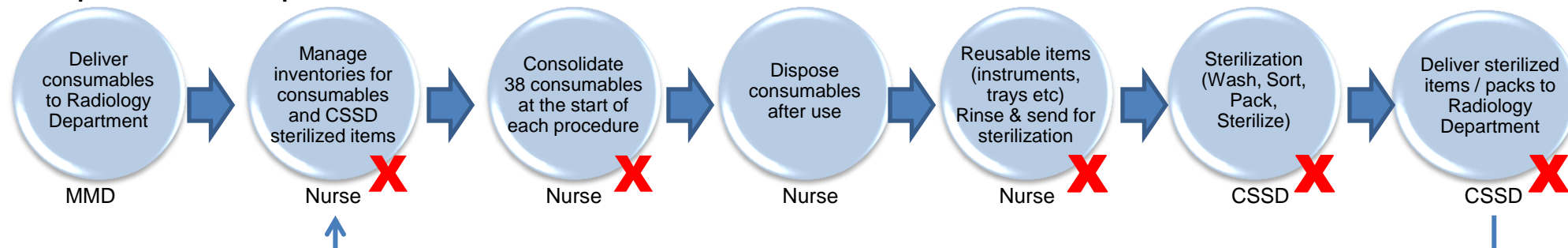
	Monthly Savings
Manpower Cost	\$ 9,280
CSSD Sterilisation Cost	\$ 14,888
Total Monthly Savings	\$ 24,168
<b>Total Annual Savings</b>	<b>\$ 290,020</b>

### Time Saved

	Before	After
Inventory Management, preparation and set up time	50 mins	15 mins

The elimination of the inventory management, preparation and set up activities have released the nurses with more time to provide quality care for the patients. See the below activity diagram for more details.

### Preparation and Set Up Activities



**X** – Steps eliminated in the new process  
**CSSD** – Central Sterilized Supply Department

## Conclusion

The cost management in using standardized 100% disposable Radiology packs across Hospitals has translated to annual cost savings of **\$290K**. The 100% disposable Radiology packs were standardized among the participating Hospitals, to reduce variations and inventory holding. The new process has removed complications of sterilizations and re-packing by nurses which in turn improved work efficiency and productivity by as much as 40 hours per day for the 3 Hospitals.



Photo: Sample of standardized radiology pack (100% Disposables)